White paper topic submitted to MEPAG 38
https://mepag.jpl.nasa.gov/meetings.cfm?expand=m38

Jet Propulsion Laboratory
California Institute of Technology

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Mars Science Helicopter

Compelling Science Enabled by an Aerial Platform

Jonathan Bapst, T. J. Parker, J. Balaram, T. Tzanetos, L. H. Matthies, C. D. Edwards, et al.
Jet Propulsion Laboratory, California Institute of Technology

Revolutionizing Mars Exploration with Rotorcraft

- Mars Helicopter Technology Demo aboard Perseverance Rover will demonstrate flight at Mars next year
- Dragonfly at Titan in 2030s

↳ **Rotorcraft enable science impossible from orbit and inaccessible to landers and rovers**

Hyperlinks

[Seeking Co-Signatories!](#) (Google Doc)

[MSH MEPAG 1-Pager](#) (MEPAG Site)

jonathan.bapst@jpl.nasa.gov (Email)

Rotorcraft-Enabled Exploration

MSH Vehicle Capabilities:

- **Range (2–10 km/sol)**
- **Extreme terrain access and traversability (cliffs, skylights, sand dunes)**
- **Atmosphere (1 km+ altitude)**
- **Payload Capability (1–5 kg)**

*Exact capabilities depend on vehicle and tradeoffs

Compelling Mars Science

High-priority questions and investigation resources:

↳ **Community**

- **Planetary Science Decadal Survey**
- **MEPAG Goals**
- **JPL A-Team Study**